Table xxxi. (p. 408) is headed, "Percentage of nitrogen and minerals in the fasted live weights of cattle, sheep, and pigs." This heading should be, "Amounts of nitrogen and minerals in 1000 pounds fasted live weights, &c."

The illustrations in chapters xxv. and xxvi. are very poor indeed, especially Fig. 190, which is perhaps intended as a puzzle print. Also Figs. 171-3 are very bad attempts to convey an idea of what a cow is like. Figs. 160-4 are equally poor.

Apart from these details, we cannot but say that the book as a whole is an admirable work, and superior to anything of its kind which we have yet seen. It will prove a boon, alike to students and to educated farmers.

W. T.

HYLO-IDEALISM.

Further Reliques of Constance Naden. Edited by George M. McCrie. (London: Bickers and Son, 1891.)

WE have already in these pages expressed our opinion, in a notice of her "Induction and Deduction," that, had the hand of Death been withheld, Miss Naden would have made valuable contributions to philosophic thought. The volume of "Further Reliques" now before us serves to justify this opinion. It is questionable, however, whether her friends have been well-advised in including the "Geology of the Birmingham District," admirable as it is as a student's prize essay. In any case, since it was included, it would have been only just to Miss Naden to have requested someone acquainted with geological nomenclature to revise the proofs. On a single page we have *Trianic* for *Triassic*, *Keupes* for *Keuper*, *Llandeils* for *Llandeilo*, and *Paradoyidian* for *Paradoxidian.* This essay is dotted over with such misprints (the genus *Orthis* being printed, on p. 25, both *Orttiis* and *Orttus*). Nor are other parts of the book entirely free from errors due to careless editing. On p. 4, *destruction* is printed where the sense requires *distinction;* and on p. 160, *evidence*, where the author clearly meant to write *eloquence.*

As we before pointed out, for Miss Naden the fundamental principle in philosophy is the famous Protagorean formula of relativity, that "Man is the measure of all things, of things that are that they are, and of things that are not that they are not." In a kind of parable she describes the creation of the external world:—

> "A myriad etherial waves, of inconceivable minuteness, enter the tiny window of the eye, and beat against the delicate lining of its darkened chamber. The pulsations are taken up, and transmitted along the optic nerve to the base of the brain, and thence to the gray thought-cells of the cerebral hemispheres. And in these gray thought-cells lives the God who says, 'Let there be light,' and there is light. If the optic nerve be an inefficient messenger; if, maimed or paralyzed, it fail to convey the vibrations received from without, the creative fiat will never be issued, and the world will remain, for the God of that one cerebrum, without form, and void. He is not a First Cause, since a stimulus is needed to set him in action; but he is certainly the only authentic Creator of the world as yet discovered by science, philosophy, or religion."

Whether this way of putting the matter is in the best possible taste, we do not pretend to decide. It is with Miss Naden's philosophical position, not with any other aspect of her views, that we can deal here. Philosophically, her view is, that the gray thought-cells are for her, and for each and all of us, the creators of the world. "But here," she continues—in her article on "Hylo-idealism," prefixed to certain letters addressed to her by Dr. Lewins, of the Army Medical Department—

> "But here comes the most critical point of the inquiry. If the universe be simply a more or less coherent vision; if its very solidity and extension be but parts of the 'realistic' drama, how are we to know that there is any such thing as matter? . . . How are we to be sure that the brain itself really exists, and that the all-generating cells are not mere illusory appearances?"

How does Miss Naden answer this question, by which she is by no means the first to be puzzled?

> "The puzzle," she says, "is not so hard as it looks. The uttermost sceptic tacitly assumes the possibility of argument; that is, of a course of reasoning, in which every step is dependent on the preceding step, while the origin of the whole is some group of observed facts. If this be a delusion, and the last step stand in no kind of causal connection with the first, evidently argument is impossible, and the sceptic's lucubration shares the general invalidity. A succession of mere mental phenomena, of mere inert pictures, cannot constitute reasoning, because one inert picture cannot produce or condition another. If a mental state possess no property except the property of being perceptible, it is obviously purely passive, and exerts no real influence upon subsequent mental states. Now, as this position is utterly unthinkable, and is not less destructive to scepticism than to materialism, we are obliged to assume the existence of some active basis of thought—that is, of something which thinks. What we assume of the individual self we extend analogically to other men, who are to us other selves. And having seen that sensation and motion follow upon excitation of the brain, and are suspended or destroyed by paralysis of the brain, we are justified in restoring our thought-cells to their proud creative eminence, and in proclaiming that they constitute this 'active basis of thought'; that they think, and therefore exist."

In an earlier paper on "Scientific Idealism," included in the "Further Reliques," Miss Naden says:—

> "For the present I must be content to plagiarize from Descartes, and to say of the cerebrum, '*Cogitat ergo est.*' It can appear to us only phenomenally, and we cannot speak of it otherwise than in terms of phenomena; but here, at least, we are forced to assume an underlying *noumenon*, while renouncing the vain hope of penetrating to its essential nature by reason or intuition."

So, after all, the thought-cells which have been restored to their proud creative eminence and proclaimed as constituting the "active basis of thought," turn out to be phenomena like the rest of the "realistic drama," and "even the vibrations supposed to impinge on the surface of the body, and the molecular tumult propagated along the nerves, are merely convenient intellectual representations of the unknown"—to which Dr. Lewins adds in a footnote, "and nothing until asselfed," without, however, explaining how "nothing" in the process of asselfment becomes something.

Such, so far as we understand it, is hylo-idealism. In it one recognizes an old friend under a new name. It would seem that Miss Naden admitted with reluctance the phenomenal nature of the all-creative thought-cells.

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As it is, her views are hardly consistent. She generally appears to regard the organism or the thought-cells as the only reality—a reality set over against, and in marked contradistinction to, the "realistic drama" of the surrounding universe. But, in the passage above indicated, she admits the phenomenal nature of the thought-cells, and confesses an unknown *noumenon*. We do not think that Miss Naden's philosophy had reached its final form when Death so untimely snatched her hence.

C. LL. M.

PHYSIOGRAPHY.

The Realm of Nature. An Outline of Physiography. By Hugh Robert Mill, D.Sc. Edin., F.R.S.E. (London: John Murray, 1892.)

THE scope of physiography has perhaps been more misunderstood than that of any other subject. It had its birth in the Government system of science examinations, and the new name was applied to distinguish the subject from the older and narrower one of physical geography, which was so widely taught in elementary schools.

In the great majority of the text-books which have hitherto appeared, the authors have rigidly followed the lines laid down in the syllabus of the Science and Art Department, and have generally contented themselves with stating facts, more or less accurate, without properly considering their inter-relation. It is a great relief to turn from these to the book before us. It is written independently of all examinations, and in it the true place of physiography among the sciences is clearly defined.

The book is one of the University Extension manuals, of which the editor (Prof. Knight) says: "Their aim is rather to educate than to inform." No better subject could therefore have been selected as one of such a series, and Dr. Mill fully bears this aim in mind. Indeed, in this respect the book is worthy to be compared with the "Introductory" science primer written by Prof. Huxley some years ago. The opening chapter deals with such matters as "Nature," "Science," "Use of the Senses," "Reason," "Common Sense," "Cause and Effect, and 'Natural Laws,'" all of which are set forth very clearly, and made deeply interesting. For the benefit of those who may have doubts as to the meaning of physiography, we may quote the following from this chapter:—

> "Physiography means literally the description of Nature (p. 1). . . . It describes the substance, form, arrangement, and changes of all the real things of Nature in their relations to each other, giving prominence to comprehensive principles rather than to isolated facts (p. 3). . . . In order to have a just conception of the universe, the results of specialized research must be fitted harmoniously together. This is the function of physiography, which has, consequently, a unique value in mental training, being at once an introduction to all the sciences and a summing up of their results. It enables a beginner to obtain a quicker insight into any of the special sciences and a fuller grasp of it, while, at the same time, a student versed in any one special science is enabled to appreciate far more fully than an unversed one its relation to all others and to the system of the universe" (p. 13).

Succeeding chapters deal with subjects somewhat after the order of the syllabus of the Science and Art Department. It is only necessary to say of these that they are excellent, and that they have been revised by well-known specialists, including such names as Prof. Tait, Dr. Copeland, and Dr. John Murray. In chapter xvi. there is an admirable account of "Life and Living Creatures," in which is given a good outline of the classification, distribution, and functions of animals and plants. The final chapter is reserved for "Man in Nature," and deals with the distribution of the various types of humanity, the effects of environment, migrations, and man's power of altering the course of Nature's works. A useful list of memoirs and books is appended to each chapter.

The book is fully illustrated, chiefly by new diagrams, and there are nineteen beautiful maps, which have been specially prepared by Mr. Bartholomew, whose competence for such work is well known. These maps form an important feature of the book, and illustrate, amongst other things, earthquake regions, isotherms, rainfall, and the evolution of continents.

The whole book shows signs of the greatest possible care in preparation, and it is not an easy matter to suggest improvements. It is a very valuable contribution to the literature of the subject, and we trust that it will meet with the appreciation it deserves. It is admirably adapted for all thoughtful persons desiring an insight into scientific methods; and although not intended as a book for use in schools, all teachers and students of the subject will do well to make themselves acquainted with its contents.

A. F.

OUR BOOK SHELF.

Grasses of the South-West. Plates and Descriptions of the Grasses of the Desert Region of Western Texas, New Mexico, Arizona, and Southern California. Part II. By Dr. George Vasey, Botanist, Department of Agriculture. 50 Plates, with descriptive Letterpress. (Washington: Government Printing Office, 1891.)

THE first part of this work was issued in October 1890, and duly noticed in our columns. It also contained 50 plates. It is a pity that in this second part the numbering from 1 to 50 is begun over again. It would have been much more easy to cite the plates continuously from 1 to 100. The present part goes all through the series of tribes again, and includes 4 species of Paspalum, 3 of Stipa, 4 of Muhlenbergia, 5 of Sporobolus, 9 of Triodia, 5 of Diplachne, and 4 of Eragostis. Most of the species are endemic, and very few of them have been figured before. None of them are British species, but one of the Stipas is a variety of the common European feather-grass (*Stipa pennata*). A good general handbook of grasses is one of the books most urgently wanted both by systematic botanists and agriculturists; and the United States Department of Agriculture is doing a very useful work in bringing out these bulletins. The next two bulletins are to be devoted to the grasses of the Pacific slope, and the four numbers will bind up into one volume, containing 200 figures.

Sporting Sketches in South America. By Admiral Kennedy. (London: R. H. Porter, 1892.)

THE sketches presented in this volume appeared originally in *Land and Water*, and are now reprinted with only such slight changes as "time and circumstances have

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